

AXIS 82+ & 83+ Developer Board & Device Server

*Deploy your own embedded
Linux applications*

The AXIS 82+ Developer Board and AXIS 83+ Device Server are intended for the deployment of your own embedded Linux applications. With a sturdy industrial design, the hardware fits most deployment requirements.

Complete 'ready-to-use' product

Supplied as a single printed circuit board as the AXIS 82+ Developer Board, or packaged within a durable aluminum casing in the AXIS 83+ Device Server, these otherwise identical products are equipped with external connectors for dual* 100 MBit Ethernet, USB, COM1, COM2, and RS-485 connection. They are also equipped with internal connectors that accommodate one parallel port and an additional serial port.

Enclosed in a black aluminum casing, the AXIS 83+ Device Server is compliant with immunity, emission and safety standards, and is ready for immediate deployment into industrial and other environmentally hostile environments.

Improve your time to market

The AXIS 83+ Device Server is shipped as a ready-to-use device, which means that you spend no time at all on hardware development, authority approval testing, purchasing, or programming Ethernet addresses. Once your application is complete, the software is simply flash-loaded to the Device Server Platform, using FTP (File Transfer Protocol). With the AXIS 82+/83+ you are free to completely customize all software, including the Linux kernel.



If your application is successful and you then want to progress to building your own product, Axis also supplies the ETRAX chip for use in your own custom product designs.

Partnership Development

Axis is committed to open-source development and fully supporting its customers. Advanced technical support is available, as well as open discussion forums to facilitate good communication between the wide range of ETRAX system developers. Reference designs are available upon request.

- Programmable Device Server with Linux 2.4/2.6
- 100 MIPS performance
- Full source code available
- Certified for industrial use

*Two Ethernet ports: Full 100 MBit Ethernet with secondary Ethernet port limited to 12 MBit.

Technical Overview

- Product-ready device server platform based on the AXIS ETRAX 100LX MCM 4+16 chip. The product ships with a pre-installed Linux operating system and pre-programmed Ethernet address. Full source code is available for all applications and drivers at developer.axis.com

Ethernet Network Connection

- Primary Physical network connection on 10BaseT Ethernet or 100BaseTX Fast Ethernet networks using RJ45 twisted pair cable
- Secondary Physical network connection on 10BaseT Ethernet or 100BaseTX Fast Ethernet, but limited in speed to 12 MBit/s since it is connected through an internal USB port. Actual routing speed is 4.5 MBit between the two interfaces

Serial Connection

- Two RS232 serial ports terminated with 9 pin MALE D-SUB connectors, both ports support RXD, TXD, RTS, CTS, DSR, DTR, RI (not on COM1) and CD at baud rates up to 115200 bps

Pinout:		
1	CD	Carrier detect (Input)
2	RxD	Receive Data (Input)
3	TxD	Transmit Data (Output)
4	DTR	Data Terminal Ready (Output)
5	GND	Ground
6	DSR	Data Set Ready (Input)
7	RTS	Request To Send (Output)
8	CTS	Clear To Send (Input)
9	RI	Ring Indicator (Input)

- One additional serial port is located on pin headers on the board and may be used for debugging



RS485/422 Terminal Block

- One RS485/422 serial port supported on a single screw terminal block. Supports baud rates up to 1843200 bps

Pinout:	
1	AC Power
2	AC Power
3	GND
4	RS422 GND Connected to GND through 100 ohm resistor
5	RX/TX-A Use pin 5 and 6 for 2-wire RS-485
6	RX/TX-B Use pin 5 and 6 for 2-wire RS-485
7	TX-
8	TX+

Parallel port & General purpose I/O

- An onboard I/O port, located on pin headers, can be used as either a standard parallel data port, or as a general purpose I/O control port

USB 1.1 Port

- Compliant USB 1.1 (host) port for connection to USB cameras, Barcode scanners, Bluetooth, WiFi, etc.
- The port can provide +5.0 VDC, 500 mA to the device

Application Flash-loading

- The customer's Linux application can be flash loaded to the Device Server Platform over the network using FTP (File Transfer Protocol)

Hardware

- CPU: 32 bit RISC processor (AXIS ETRAX 100LX MCM 4+16)
- Flash memory: 8 Mbytes (4.5 Mbytes available for applications in default configuration).
- RAM: 32 Mbytes

Power Supply

- Power: 9-24 VAC (or DC), 9.6 VA, via external power supply (included) or on screw terminal block
- Power consumption typically between 2.8 VA and 3.2 VA. With load on USB Vbus, between 5.0 VA and 7.2 VA

Operating Environment

- Temperature: +5°C to +50°C
- Humidity: 8-80% RHG, non-condensing

Product Warranty

- A one-year warranty is included

The specifications below are appropriate to the AXIS 83+ Device Server (supplied with aluminum casing) only

Mechanical Design

- A stable aluminum casing that can be conveniently mounted on a wall (mounting brackets are included)

Metrics

- Height: 41 mm
- Width: 140 mm
- Length: 118 mm
- Weight: 420 g

Product Identification

- Sticker label on the underside, which identifies the unit as an AXIS 83+ and also identifies the Ethernet address of the unit

Approvals*

- AXIS 83+ Device Server compliant with both industrial and light industrial/commercial EMC standards for both emission and immunity
- Immunity Standards:
EN 55024:1998
EN 61000-6-2:2001
EN 61000-6-1:2001
- Emission Standards:
EN 55022:1998+A1 Class B (CISPR 22:1997+A1, Class B)
FCC Part 15, Subpart B, Class A
FCC Part 15, Subpart B, Class B
EN 61000-3-2:2000
EN 61000-3-3:1995+A1
- Safety:
EN 60950, UL (US version).

*The approvals are made with the aluminum casing and cannot be guaranteed when the PCB is not mounted in a similar box

More information: developer.axis.com